

Chapter 6

Glossary

active fault – A fault that is likely to have another earthquake sometime in the future. Faults are commonly considered to be active if they have moved one or more times in the last 10,000 years. In assessing seismic hazard as part of the U.S. Geological Survey's National Earthquake Hazard Reduction Program, faults for which there is surface evidence of tectonic activity during the Quaternary Period are considered active.

acute – Severe but of short duration; not chronic.

air pollutant – Generally, an airborne substance that could, in high-enough concentrations, harm living things or cause damage to materials. From a regulatory perspective, an air pollutant is a substance for which emissions or atmospheric concentrations are regulated or for which maximum guideline levels have been established due to potential harmful effects on human health and welfare.

air quality control region – Geographic subdivisions of the United States, designed to deal with pollution on a regional or local level. Some regions span more than one state.

alluvium (alluvial) – Unconsolidated, poorly sorted detrital sediments, ranging from clay to gravel sizes, deposited by streams.

ambient air – The atmosphere around people, plants, and structures.

Ambient Air Quality Standards – Regulations prescribing the levels of airborne pollutants that may not be exceeded during a specified time in a defined area.

American Indian Religious Freedom Act of 1978 – An act that protects and preserves for Native Americans their traditional religious rights, including the rights of access to religious sites, use and possession of sacred objects, and

worship through traditional ceremonies and rites.

aquatic – Living or growing in, on, or near water.

aquifer – An underground geologic formation, group of formations, or part of a formation capable of yielding a significant amount of water to wells or springs.

aquitard – A relatively less permeable geologic unit that inhibits the flow of water.

Archaeological Resources Protection Act of 1979 – An act protecting cultural resources on federally owned lands. This act requires a permit for archaeological excavations or the removal of any archaeological resources on public or Native American lands. It also prohibits interstate or foreign trafficking in cultural resources taken in violation of state or local laws, and requires Federal agencies to develop plans for surveying lands under their control.

archaeological site – Any location where humans have altered the terrain or discarded artifacts during prehistoric or historic times.

artifact – An object produced or shaped by human beings and of archaeological or historic interest.

artisanal mining – A general term used in reference to small-scale mining operations prevalent in some developing countries that employ the crude and highly polluting process of mixing mercury with sediments from river bottoms and adjacent areas in order to extract gold.

attainment area – An area considered to have air quality as good as or better than the National Ambient Air Quality standards for a given pollutant. An area may be in attainment for one

pollutant and nonattaining for others. See also *nonattainment area*.

basalt – The most common volcanic rock, dark gray to black in color, high in iron and magnesium, and low in silica. It is typically found in lava flows.

basin – Geologically, a circular or elliptical downwarp or depression in the Earth's surface that collects sediment. Younger sedimentary beds occur in the center of basins. Topographically, a depression into which water from the surrounding area drains.

bedding plane – Surface separating layers of sedimentary rocks and deposits. Each bedding plane marks the termination of one deposit and the beginning of another of different character, such as a surface separating a sandstone bed from an overlying mudstone bed. Rock tends to break or separate readily along bedding planes.

bedrock – The solid rock that lies beneath soil and other loose surface materials.

by-product mercury – Mercury produced from mining operations where it is not the primary product.

bound – An analysis of impacts or risks such that the result overestimates or describes a limit on (i.e., "bounds") potential impacts or risks.

bounding analysis – An analysis designed to overestimate or determine an upper limit to potential impacts or risks.

capable fault – As defined in 10 CFR 100, Appendix A, III(g), "A capable fault is a fault which has exhibited one or more of the following characteristics: (1) movement at or near the ground surface at least once within the past 35,000 years or movement of a recurring nature within the past 500,000 years; (2) macro-seismicity instrumentally determined with records of sufficient precision to demonstrate a direct relationship with the fault; (3) a structural

relationship to a capable fault according to characteristics (1) or (2) of this paragraph such that movement on one could be reasonably expected to be accompanied by movement on the other. In some cases, the geologic evidence of past activity at or near the ground surface along a particular fault may be obscured at a particular site. This might occur, for example, at a site having a deep overburden. For these cases, evidence may exist elsewhere along the fault from which an evaluation of its characteristics in the vicinity of the site can be reasonably based. Such evidence shall be used in determining whether the fault is a capable fault within this definition. Notwithstanding the foregoing paragraphs III(g) (1), (2), and (3), structural association of a fault with geologic structural features which are geologically old (at least pre-Quaternary) such as many of those found in the eastern region of the United States shall, in the absence of conflicting evidence, demonstrate that the fault is not a capable fault within this definition."

carbon monoxide – A common air pollutant formed by incomplete combustion; a colorless, odorless gas; toxic, if breathed in high concentrations over an extended period; can result in chronic effects from exposure to lower concentrations; and is a fire and explosion hazard.

carbonate – A sedimentary rock made mainly of calcium carbonate (CaCO_3). Limestone and dolomite are common carbonate sedimentary rocks.

chronic – Lasting for a long period or marked by frequent recurrence.

civilian labor force – All persons defined as employed or unemployed by private industry and state and local government.

clay – The name for a family of finely crystalline sheet silicate minerals that commonly form as a product of rock weathering. Also, any particle smaller than or equal to about 0.00008 inches (0.002 millimeters) in diameter.

Clean Air Act – An act mandating and providing for the enforcement of regulations to control air pollution from various sources.

Code of Federal Regulations – A publication in codified form of all Federal regulations in force.

colluvium (colluvial) – A loose deposit of rock debris accumulated at the base of a cliff or slope.

confined aquifer – A permeable geologic unit bounded above and below by aquitards and containing water at a pressure higher than atmospheric pressure.

conformity – As defined in the Clean Air Act, “the nation’s compliance with an implementation plan’s purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards and achieving expeditious attainment of such standards. Activities in conformity will not (1) cause or contribute to any new violation of any standard in any area, (2) increase the frequency or severity of any existing violation of any standard in any area, or (3) delay timely attainment of any standard or any required interim emission reduction or other milestones in any area.”

conglomerate – A sedimentary rock made of rounded rock fragments, such as pebbles, cobbles, and boulders, in a finer-grained matrix. To be classified a conglomerate, some of the constituent pebbles must be at least about one-thirteenth of 1 inch (2 millimeters) across.

criteria pollutants – Common, widespread pollutants for which air quality standards have been established in accordance with the Clean Air Act. The U.S. Environmental Protection Agency developed these standards on the basis of its research into scientific knowledge about their health effects and other effects (the criteria). Today, standards are in effect for six criteria pollutants: sulfur dioxide, carbon monoxide, particulate matter with aerodynamic diameters of less than or equal to 10 microns and less than or equal to 2.5 microns, nitrogen dioxide, ozone, and lead.

critical habitat – As defined in the Endangered Species Act of 1973, “specific areas within the geographical area occupied by [an endangered or threatened] species ..., essential to the conservation of the species and which may require special management considerations or protection; and specific areas outside the geographical area occupied by the species . . . that are essential for the conservation of the species.”

cultural resources – Archaeological sites, architectural features, traditional-use areas, and Native American sacred sites.

cumulative impacts – The incremental impact on the environment of an action in combination with other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal), private industry, or individual undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR 1508.7).

day-night average sound level – The 24-hour, A-weighted equivalent sound level expressed in decibels. A 10-decibel penalty is added to sound levels between 10:00 p.m. and 7:00 a.m. to account for increased annoyance due to noise during night hours.

decibel – A logarithmic unit of sound measurement that describes the magnitude or particular quantity of sound pressure or power with respect to a standard reference value. In general, a sound doubles in loudness with every increase of 10 decibels.

decibel, A-weighted – A unit of sound measurement that incorporates a metering characteristic and the “A” weighting specified by the American National Standards Institute in S1.4–1983 (R 2001) to account for the frequency response of the human ear.

decommissioning – Actions taken at the end of the life of a facility to make it suitable for reuse, including surveillance, maintenance, decontamination, and/or dismantlement.

decontamination – The removal of radioactive or chemical contamination from facilities, equipment, or soils by washing, heating, chemical or electrochemical action, mechanical cleaning, or other techniques.

deposition – In geology, the laying down of potential rock-forming materials; sedimentation. In atmospheric transport, the settling out on ground and building surfaces of atmospheric aerosols and particles (“dry deposition”) or their removal from the air to the ground by precipitation (“wet deposition”).

detritus (detrital) – In geology, mineral and rock fragments derived from preexisting rocks.

diabase – A dark igneous rock that is the intrusive equivalent of basalt.

dip – A measure of the angle between the flat horizon and the slope of a sedimentary layer, fault plane, metamorphic foliation, or other geologic structure.

direct jobs – Workers required to perform required functions and tasks.

discharge – In surface water hydrology, the amount of water issuing from a spring or in a stream that passes a specific point in a given period of time.

dolomite – A mineral composed of calcium-magnesium-carbonate ($\text{CaMg}[\text{CO}_3]_2$) that is the chief constituent of a sedimentary rock commonly called “dolomite” as well as of some kinds of marble. It is thought to form by the alteration of limestone by seawater.

dolostone – A carbonate rock made up predominately of the mineral dolomite, $\text{CaMg}(\text{CO}_3)_2$.

drainage basin – The land area drained by a particular stream.

drinking water standards – The level of constituents or characteristics in a drinking water supply specified in regulations under the Safe Drinking Water Act as the maximum permissible.

earthquake – A sudden ground motion or vibration of the Earth. It can be produced by a rapid release of stored-up energy along an active fault.

ecology – The study of the interrelationships of organisms and their environment.

ecosystem – A community of organisms and their physical environment interacting as an ecological unit.

effluent – A gas or liquid discharged into the environment.

endangered species – As defined in the Endangered Species Act of 1973, “any species which is in danger of extinction throughout all or a significant part of its ranges.”

Endangered Species Act of 1973 – An act requiring Federal agencies, with the consultation and assistance of the Secretaries of the Interior and Commerce, to ensure that their actions will not likely jeopardize the continued existence of any endangered or threatened species or adversely affect the habitat of such species.

environmental assessment – A written environmental analysis prepared pursuant to the National Environmental Policy Act to determine whether a Federal action would significantly affect the environment and thus require preparation of a more detailed environmental impact statement. If the action does not significantly affect the environment, then a Finding of No Significant Impact is prepared.

environmental impact statement – A document required of Federal agencies by the National Environmental Policy Act for major proposals or legislation that will or could significantly affect the environment. A tool for decisionmaking, it describes the positive and negative effects of the proposed and alternative actions.

environmental justice – With reference to policies of, and actions by the Federal Government, environmental justice is achieved when implementation of the policy or action would not result in disproportionately high and adverse impacts on minority populations or low-income populations.

epicenter – The point on the Earth's surface directly above the focus of an earthquake discharged into the environment.

equivalent sound (pressure) level – The equivalent, steady sound level that, if continuous during a specified time period, would contain the same total energy as the actual time-varying sound. L_{eq} (1-h) and L_{eq} (24-h) are the 1-hour and 24-hour equivalent sound levels, respectively.

erosion – Removal of material by water, wind, or ice.

Farmland Protection Policy Act – An act whose purpose is to reduce the conversion of farmland to nonagricultural uses as a result of Federal projects and programs. The act requires that Federal agencies comply to the fullest extent possible with state and local government policies to preserve farmland. It includes a recommendation that evaluations and analyses of prospective farmland conversion impacts be made early in the planning process—before a site or design is selected—and that, where possible, agencies make such evaluations and analyses part of the National Environmental Policy Act process.

fault – A fracture or a zone of fractures within a rock formation along which vertical, horizontal,

or transverse slippage has occurred. A normal fault occurs when the hanging wall has been depressed in relation to the footwall. A reverse fault occurs when the hanging wall has been raised in relation to the footwall.

Finding of No Significant Impact – A document from a Federal agency briefly presenting the reasons why an action, not otherwise excluded, will not have a significant effect on the human environment and will not require an environmental impact statement.

flask – A container used to store mercury. Mercury storage flasks are typically made of 0.2-in (0.5-cm) thick, low-carbon steel, can hold 76 lb (34 kg) of mercury, and are sealed with a threaded plug. A typical mercury storage flask is similar in size and dimensions to a 3-liter soda bottle.

floodplain – The lowlands and relatively flat areas adjoining inland and coastal waters and the flood-prone areas of offshore islands. Floodplains include, at a minimum, that area with at least a 1.0 percent chance of being inundated by a flood in any given year.

The *base floodplain* is defined as the area which has a 1.0 percent or greater chance of being flooded in any given year. Such a flood is known as a 100-year flood.

The *critical action floodplain* is defined as the area which has at least a 0.2 percent chance of being flooded in any given year. Such a flood is known as a 500-year flood.

The *probable maximum flood* is the hypothetical flood considered to be the most severe reasonably possible flood, based on the comprehensive hydrometeorological application of maximum precipitation and other hydrological factors favorable for maximum flood runoff (e.g., sequential storms and snowmelts). It is usually several times larger than the maximum recorded flood.

formation – In geology, the primary unit of formal stratigraphic mapping or description. Most formations possess certain distinctive features.

fracture – Any break in rock along which no significant movement has occurred.

fugitive emissions – Emissions to the atmosphere from pumps, valves, flanges, seals, and other process points not vented through a stack. Also included are emissions from area sources such as ponds, lagoons, landfills, piles of stored material, and exposed soil.

full-time equivalent (FTE) – The percentage of time a person works represented as a decimal. One FTE is equivalent to 2,080 hours of work (8 hours per day, 5 days per week, 52 weeks per year). A person working 2,080 hours per year is 1.0 FTE, a half-time person is 0.5 FTE, etc. FTE may also be used to represent the work provided by multiple persons. Four persons working half time equal 2.0 FTEs.

glaciation – The formation, advance and retreat of glaciers, and the results of these activities.

geology – The science that deals with the Earth: the materials, processes, environments, and history of the planet, including rocks and their formation and structure.

global commons – Any territory (land, water, and air space) that is outside the territorial jurisdiction of any nation, and includes Antarctica and the oceans outside the territorial limits of any nation.

global warming – The progressive gradual rise of the Earth's surface temperature thought to be caused by the greenhouse effect and responsible for changes in global climate patterns. The greenhouse effect is the trapping and build up of heat in the atmosphere (troposphere) near the Earth's surface. Some of the heat flowing back toward space from the Earth's surface is absorbed by water vapor, carbon dioxide, ozone,

and several other gases in the atmosphere and then reradiated back toward the Earth's surface.

groundwater – Water below the ground surface in a zone of saturation. It usually occurs in aquifers that may supply wells and springs as well as baseflow to major streams and rivers.

hazardous air pollutants – Air pollutants not covered by National Ambient Air Quality Standards but which may present a threat of adverse human health or environmental effects. More broadly, hazardous air pollutants are any of the 188 pollutants to be regulated or reviewed under Section 112(b) of the Clean Air Act. Very generally, hazardous air pollutants are any air pollutants that may realistically be expected to pose a threat to human health or welfare.

hazardous material – A material, including a hazardous substance as defined by 49 CFR 171.8, that poses a risk to health, safety, and property when transported or handled.

hazardous waste – According to the Resource Conservation and Recovery Act, a solid waste that because of its characteristics may (1) cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitating reversible illness, or (2) pose a substantial hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. Hazardous wastes appear on special U.S. Environmental Protection Agency lists and possess at least one of the following characteristics: (1) ignitability, (2) corrosivity, (3) reactivity, or (4) toxicity.

historic resources – Archaeological sites, architectural structures, and objects dating from 1492 or later, after the arrival of the first Europeans to the Americas.

indirect jobs – Jobs generated or lost within a regional economic area as a result of a change in employment at the site facility.

infrastructure – The basic facilities, services, and utilities needed for the functioning of an industrial facility. Transportation and electrical systems are part of the infrastructure.

interbedded – Occurring between beds (layers) or lying in a bed parallel to other beds of a different material.

labor force – All persons of a defined geographic area classified as employed or unemployed.

lacustrine – Relating to lakes, as in lacustrine sediments.

land use – A characterization of land surface in terms of its potential utility for various activities.

lava – Molten rock (magma) that reaches the Earth's surface through a volcanic eruption. When cooled and solidified, forms extrusive (volcanic) igneous rock.

limestone – A sedimentary rock composed mostly of the mineral calcite, CaCO_3 .

loam – Soil material that is composed of 7 to 27 percent clay particles, 28 to 50 percent silt particles, and less than 52 percent sand particles.

low-income individuals – Individuals whose income is less than the poverty threshold defined in the U.S. Bureau of the Census' Current Population Reports, Series P-60 on Income and Poverty.

low-income populations – All low-income individuals living within an area potentially affected by implementation of the alternatives.

magnitude – A number that reflects the relative strength or size of an earthquake. Magnitude is based on the logarithmic measurement of the maximum motion recorded by a seismograph. An increase of one unit of magnitude (for example, from 4.6 to 5.6) represents a 10-fold increase in wave amplitude on a seismograph recording or approximately a 30-fold increase in the energy released. Several scales have been

defined, but the most commonly used are (1) local magnitude (ML), commonly referred to as "Richter magnitude," (2) surface-wave magnitude (Ms), and (3) body-wave magnitude (Mb). Each is valid for a particular type of seismic signal varying by such factors as frequency and distance. These magnitude scales will yield approximately the same value for any given earthquake within each scale's respective range of validity. A fourth scale (moment magnitude [Mw]) is the latest to be applied that better estimates the size of very large earthquakes that the other scales underestimate by varying degrees.

Market Impact Committee – An interagency committee that advises the Department of Defense on the projected domestic and foreign economic effects of proposed U.S. National Stockpile transactions. The Market Impact Committee is composed of representatives from the U.S. Departments of Agriculture, Commerce, Defense, Energy, the Interior, State, and the Treasury, and the Federal Emergency Management Agency.

maximally exposed individual – A person who, hypothetically, could receive the maximum dose of radiation or hazardous chemicals.

maximum allowable market rate – The rate that mercury can be sold without undue disruption of the usual markets of producers, processors, and consumers of mercury; set by the Market Impact Committee.

megawatt – A unit of power equal to 1 million watts. Megawatt-thermal is commonly used to define heat produced, while megawatt-electric defines electricity produced.

mercury (elemental) – Elemental mercury is a dense, naturally occurring, silver-colored metallic element that is liquid at room temperature. Sometimes called "quicksilver," liquid mercury has been used extensively in manufacturing processes because it conducts

electricity, reacts to temperature changes, and alloys with many other metals.

mercury (primary) – Unused, ‘virgin’ mercury that has been produced as the main product of mining activities.

meteorology – The science dealing with the atmosphere and its phenomena, especially as relating to weather.

migration – The natural movement of a material through the air, soil, or groundwater; also, seasonal movement of animals from one area to another.

Migratory Bird Treaty Act – An act making it unlawful, except in connection with permitted activities, to pursue, take, attempt to take, capture, possess, or kill any migratory bird, or any part, nest, or egg of any such bird.

minority individuals – Individuals who identify themselves as a member of the following population groups: American Indian or Alaska Native; Asian; Black or African American; Hispanic or Latino; Native Hawaiian or Other Pacific Islander; or multiracial minority (two or more races, at least one of which is a minority race under Council on Environmental Quality guidelines). This definition is similar to that given in the Council on Environmental Quality’s environmental justice guidance; however, it has been modified to reflect revisions to the Standards for the Classification of Federal Data on Race and Ethnicity (62 FR 58782 through 58790), which is published by the Office of Budget and Management.

minority population – All minority individuals living with an area potentially affected by implementation of the alternatives.

Mississippian – A period of the Paleozoic Era, spanning the time between about 360 and 320 million years ago (following the Devonian Period and preceding the Pennsylvanian Period).

Modified Mercalli Intensity – A level on the modified Mercalli scale. A measure of the

perceived intensity of earthquake ground shaking with 12 divisions, from I (not felt by people) to XII (damage nearly total). It is a unitless expression of observed effects.

moraine – A single, large mass of glacial till that accumulates, typically at the edge of a glacier.

mudstone – A detrital sedimentary rock composed of clay-sized particles.

National Ambient Air Quality Standards – Air quality standards established by the U.S. Environmental Protection Agency for certain widespread “criteria” pollutants in accordance with the Clean Air Act, as amended. The “primary” standards are intended to protect the public health with an adequate margin of safety; the “secondary” standards, to protect the public welfare, including plant and animal life, visibility, and materials, from any known or anticipated adverse effects of a pollutant.

National Environmental Policy Act of 1969 – An act constituting the basic national charter for protection of the environment. The act calls for the preparation of an environmental impact statement for every major Federal action that may significantly affect the quality of the human or natural environment. Its main purpose is to provide environmental information to decisionmakers so that their actions are based on an understanding of the potential environmental consequences of a proposed action and the reasonable alternatives.

National Historic Preservation Act of 1966, as amended – An act providing that property resources with significant national historic value be placed on the National Register of Historic Places. It does not require permits; rather, it mandates consultation with the proper agencies whenever it is determined that a proposed action might impact a historic property.

National Pollutant Discharge Elimination System – A Federal permitting system controlling the discharge of effluents to surface waters of the United States and regulated through the Clean Water Act, as amended.

National Register of Historic Places – A list of districts, sites, buildings, structures, and objects of prehistoric or historic local, state, or national significance. The list, maintained by the Secretary of the Interior, is expanded as authorized by Section 2(b) of the Historic Sites Act of 1935 (16 U.S.C. 462) and Section 101(a)(1)(A) of the National Historic Preservation Act of 1966, as amended.

Native American Graves and Repatriation Act of 1990 – An act established to protect Native American graves and associated funerary objects. This act requires Federal agencies and museums to inventory human remains and associated funerary objects, to provide culturally affiliated tribes with the documented results of that inventory, and to return, on request, items in the inventory to the culturally affiliated tribes.

nitrogen oxides – The oxides of nitrogen, primarily nitrogen oxide and nitrogen dioxide, produced in the combustion of fossil fuels. Nitrogen dioxide emissions constitute an air pollution problem, as they contribute to acid deposition and the formation of atmospheric ozone.

noise – Undesirable sound that interferes or interacts negatively with the human or natural environment. Noise may disrupt normal activities (e.g., hearing, sleep), damage hearing, or diminish the quality of the environment.

nonattainment area – An area that the U.S. Environmental Protection Agency has designated as not meeting (i.e., not being in attainment of) one or more of the National Ambient Air Quality Standards for sulfur dioxide, nitrogen dioxide, carbon monoxide, ozone, lead, and particulate matter. An area may be in attainment for some pollutants, but not for others.

Ordovician – The second earliest period of the Paleozoic Era, spanning the time between about 505 and 438 million years ago. During this period, most of the Earth's landmass existed as one large continent in the Southern Hemisphere. The period is best known for its diversity of marine invertebrate life.

outfall – The discharge point of a drain, sewer, or pipe into or that eventually leads to a body of water.

Outwash – Deposits of gravel, sand, and silt laid down by glacial melt waters (i.e., streams and rivers).

overpacks – Lined, 30-gallon (114-liter) steel drums used to store mercury storage flasks.

ozone – The triatomic form of oxygen; in the stratosphere, ozone protects the Earth from the sun's ultraviolet rays, but in lower levels of the atmosphere, ozone is considered an air pollutant.

pallet – A small platform on which material is stored. Pallets are often constructed of wood and serve to lift the material off the ground to keep it dry. Pallets also enable the material to be easily lifted with a forklift.

particulate matter (PM) – Any finely divided solid or liquid material, other than uncombined (i.e., pure) water. A subscript denotes the upper limit of the diameter of particles included. Thus, PM₁₀ includes only those particles equal to or less than 10 micrometers (0.0004 inch) in diameter; PM_{2.5} includes only those particles equal to or less than 2.5 micrometers (0.0001 inch) in diameter. Total suspended particulates were first used as the indicator of particulate concentrations.

peak ground acceleration – A measure of the maximum horizontal acceleration (as a percentage of the acceleration due to Earth's gravity) experienced by a particle on the surface of the Earth during the course of earthquake motion.

Pennsylvanian – A geologic period of the Paleozoic Era, spanning the time between about 320 and 286 million years ago. The Pennsylvanian may be best known for its coal-bearing deposits that originated from vast swamps that were present at the time, as well as the formation of the Appalachian Mountains from the collision of present-day Europe and North America with present-day Africa and South America.

percent g – In measuring earthquake ground motion, the acceleration (the rate of change in velocity) experienced relative to that due to Earth's gravity (i.e., 9.8 meters per square second).

perched aquifer/groundwater – A body of groundwater of small lateral dimensions separated from an underlying body of groundwater by an unsaturated zone.

permeability – The ability of a rock, soil, or other material to allow water to flow through its interconnected spaces.

pH – A numeric value that indicates the relative acidity or alkalinity of a substance on a scale of 0 to 14, with the neutral point at 7.0. Acid solutions have pH values lower than 7.0, and basic (alkaline) solutions have values higher than 7.0.

prehistoric – Predating written history; in North America, also predating contact with Europeans.

present value – Value today of a future payment, or stream of payments, discounted at an appropriate rate.

prevention of significant deterioration – Regulations required by the 1977 Clean Air Act amendments to limit increases in criteria air pollutant concentrations above baseline in areas that already meet the National Ambient Air Quality Standards. Cumulative increases in pollutant levels after specified baseline dates must not exceed specified maximum allowable amounts. These allowable increases, also known as increments, are especially stringent in

areas designated as Class I areas (e.g., national parks, wilderness areas) where the preservation of clean air is particularly important. All areas not designated as Class I are currently designated as Class II. Maximum increments in pollutant levels are also given in 40 CFR 51.166 for Class III areas, if any such areas should be so designated by the U.S. Environmental Protection Agency. Class III increments are less stringent than those for Class I or Class II areas. See *National Ambient Air Quality Standards*.

prime farmland – As defined in 7 CFR 657.5 (a), "Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses (the land could be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water). It has the soil quality, growing season, and moisture supply needed to economically produce sustained high yields of crops when treated and managed, including water management, according to acceptable farming methods." Soil mapping units that qualify as prime farmland within each state are identified by the U.S. Department of Agriculture, National Resources Conservation Service State Conservationists.

Quaternary – The second geologic period of the Cenozoic Era, dating from about 1.6 million years ago to the present. It contains two epochs: the Pleistocene and the Holocene. It is characterized by the first appearance of human beings on Earth.

real cost – Cost of the life of a project, without an adjustment for inflation.

Record of Decision – A document providing a concise public record of an agency's decision on a proposed action for which an environmental impact statement was prepared. Prepared in accordance with 40 CFR 1505.2, the Record of Decision identifies the alternatives considered in reaching the decision, the environmentally

preferable alternative, factors balanced by the agency in making the decision, whether all practicable means to avoid or minimize environmental harm have been adopted, and if not, why they have not.

reflasking – The transfer of DNSC mercury from aging 76-lb (34.5 kg) flasks of different construction and sources to new 76-lb (34.5 kg) steel flasks of the same size and construction.

region of influence – A site-specific geographic area. The regions of influence for different resources can vary widely in extent. For example, the region of influence for ecological resources would generally be confined to the site and nearby adjacent areas, whereas the socioeconomic region of influence would include the cities and counties surrounding each site that could be affected by the proposed action.

regional economic area – A geographic area consisting of an economic node and the surrounding, economically related areas within the county, including the places of work and residences of the labor force.

rift – A valley caused by extension of the Earth's crust. Its floor forms as a portion of the crust moves downward along normal faults.

risk – The probability of a detrimental effect from exposure to a hazard. Risk is often expressed quantitatively as the probability of an adverse event occurring multiplied by the consequence of that event (i.e., the product of these two factors). However, separate presentation of probability and consequence is often more informative.

runoff – The portion of rainfall, melted snow, or irrigation water that flows across the ground and which may eventually enter surface waters.

sand – Loose grains of rock or mineral sediment formed by weathering that range in size from 0.0025 to 0.08 inches (0.0625 to 2.0 millimeters) in diameter and often consists of quartz particles.

sandstone – A sedimentary rock composed mostly of sand-size particles cemented usually by calcite, silica, or iron oxide.

sanitary waste (wastewater) – Wastes generated by normal housekeeping activities, liquid or solid (includes sludge), which are not hazardous or radioactive.

scoping – The process of soliciting public input during the initial stages of the development of an environmental impact statement.

secondary mercury – Mercury recycled from the dismantling of used products or equipment.

sedimentary rock – Rock formed from the accumulation of sediment, which may consist of fragments and mineral grains of varying sizes from pre-existing rocks, remains or products of animals and plants, the products of chemical action, or mixtures of these. Sedimentary rocks often have distinctive layering or bedding.

seismic – Pertaining to any earth vibration, especially that of an earthquake.

seismicity – The frequency and distribution of earthquakes.

sewage – The total nonhazardous organic waste and wastewater generated by an industrial establishment or a community.

sewer – A pipe or conduit (sewer) intended to carry wastewater or water-borne wastes from homes, businesses, and industries to a treatment facility.

shale – Sedimentary rock derived from mud. Commonly finely laminated (bedded). Particles in shale are commonly clay minerals mixed with tiny grains of quartz eroded from pre-existing rocks. Shaley means like a shale or having some shale component, as in shaley sandstone.

shrink-swell – Refers to the property of many clays and clay soils to swell when wetted and shrink when dried.

silt – Loose particles of rock or mineral sediment that range in size from about 0.00008 to 0.0025 inches (0.002 to 0.0625 millimeters) in diameter. Silt is finer than sand, but coarser than clay.

siltstone – A fine-grained sedimentary rock comprised mostly of silt-sized grains.

socioeconomic – Demographic and economic characteristics of a defined geographic area.

soils – All unconsolidated materials above bedrock. Natural earthy materials on the Earth's surface, in places modified or even made by human activity, containing living matter, and supporting or capable of supporting plants out of doors.

sole-source aquifer – A designation granted by the U.S. Environmental Protection Agency when groundwater from specific aquifer supplies at least 50 percent of the drinking water for the area overlying the aquifer. Sole-source aquifers have no alternative source or combination of sources that could physically, legally, and economically supply all those who obtain their drinking water from the aquifer.

solid waste – Discarded solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities. Solid waste does not include solid or dissolved materials in domestic sewage; industrial discharges subject to permit under the Clean Water Act; or source, special nuclear, or byproduct material as defined by the Atomic Energy Act.

spectral (response) acceleration – An approximate measure of the acceleration (as a percentage of the acceleration due to Earth's gravity) experienced by a building, as modeled by a particle on a mass less vertical rod having

the same natural period of vibration as the building.

Spill Prevention Control and Countermeasure Plan – A plan prepared by a facility to minimize the likelihood of a spill and to expedite control and cleanup activities should a spill occur.

State Historic Preservation Officer – That state officer charged with the identification and protection of prehistoric and historic resources in accordance with the National Historic Preservation Act.

storm water – Storm water runoff, snowmelt runoff, and surface runoff and drainage.

strike – The compass direction of the intersection between a structural surface (e.g., a bedding plane or a fault surface) and the horizontal.

sulfur oxides – Common air pollutants, primarily sulfur dioxide, a heavy, pungent, colorless gas (formed in the combustion of fossil fuels, considered a major air pollutant), and sulfur trioxide. Sulfur dioxide is involved in the formation of acid rain. It can also irritate the upper respiratory tract and cause lung damage.

surface water – All bodies of water on the surface of the earth and open to the atmosphere, such as rivers, lakes, reservoirs, ponds, seas, and estuaries.

surficial deposit – Any loose, unconsolidated sedimentary deposit lying on or above bedrock.

tectonic – Of or relating to motion in the earth's crust and occurring on geologic faults.

threatened species – As defined in the Endangered Species Act of 1973, "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range."

till – Glacial deposits laid down directly by glaciers and comprised of rock fragments that range from clay to boulder size and randomly arranged (unsorted) without bedding.

unemployment rate – The number of unemployed persons as a percentage of the labor rate.

wastewater – Water originating from human sanitary water use (domestic wastewater) and from a variety of industrial processes (industrial wastewater).

wetlands – Areas that are inundated or saturated by surface water or groundwater and that typically support vegetation adapted for life in saturated soils. Wetlands generally include swamps, marshes, bogs, and similar areas.

water quality standards and criteria – Limits on the concentrations of specific constituents or on the characteristics of water, often based on water use classifications (for example, drinking water, recreation, propagation of fish and aquatic life, agricultural and industrial use). Water quality standards are legally enforceable, whereas water quality criteria are nonenforceable recommendations based on biotic impacts.

water table – The boundary between the unsaturated zone and the deeper, saturated zone. The upper surface of an unconfined aquifer.